



U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

August 6, 2019

The Honorable Sam Graves
Committee on Transportation and Infrastructure
House of Representatives
Washington, DC 20515

Dear Congressman Graves:

As required by Public Law 112-95, the FAA Modernization and Reform Act of 2012 (the Act), Section 306, enclosed is the Federal Aviation Administration's (FAA) annual report on Safety of Air Ambulance Operations for 2017.

The Act directs the FAA to submit a report to Congress containing a summary of the data collected on helicopter air ambulance operations. This report is the FAA's third submission under the Act and it contains a summary of the data collected by the FAA from helicopter air ambulance operators from January 1, 2017, to December 31, 2017.

We have sent identical letters to Chairmen Wicker and DeFazio and Senator Cantwell.

Sincerely,

A handwritten signature in black ink, reading "DK Elwell".

Daniel K. Elwell
Acting Administrator

Enclosure



U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

August 6, 2019

The Honorable Maria Cantwell
Committee on Commerce, Science, and Transportation
United States Senate
Washington, DC 20510

Dear Senator Cantwell:

As required by Public Law 112-95, the FAA Modernization and Reform Act of 2012 (the Act), Section 306, enclosed is the Federal Aviation Administration's (FAA) annual report on Safety of Air Ambulance Operations for 2017.

The Act directs the FAA to submit a report to Congress containing a summary of the data collected on helicopter air ambulance operations. This report is the FAA's third submission under the Act and it contains a summary of the data collected by the FAA from helicopter air ambulance operators from January 1, 2017, to December 31, 2017.

We have sent identical letters to Chairmen Wicker and DeFazio and Congressman Graves.

Sincerely,

A handwritten signature in black ink, reading "DK Elwell".

Daniel K. Elwell
Acting Administrator

Enclosure



U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

August 6, 2019

The Honorable Peter DeFazio
Chairman, Committee on
Transportation and Infrastructure
House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

As required by Public Law 112-95, the FAA Modernization and Reform Act of 2012 (the Act), Section 306, enclosed is the Federal Aviation Administration's (FAA) annual report on Safety of Air Ambulance Operations for 2017.

The Act directs the FAA to submit a report to Congress containing a summary of the data collected on helicopter air ambulance operations. This report is the FAA's third submission under the Act and it contains a summary of the data collected by the FAA from helicopter air ambulance operators from January 1, 2017, to December 31, 2017.

We have sent identical letters to Chairman Wicker, Senator Cantwell, and Congressman Graves.

Sincerely,

A handwritten signature in black ink, reading "DK Elwell".

Daniel K. Elwell
Acting Administrator

Enclosure



U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

August 6, 2019

The Honorable Roger Wicker
Chairman, Committee on
Commerce, Science, and Transportation
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

As required by Public Law 112-95, the FAA Modernization and Reform Act of 2012 (the Act), Section 306, enclosed is the Federal Aviation Administration's (FAA) annual report on Safety of Air Ambulance Operations for 2017.

The Act directs the FAA to submit a report to Congress containing a summary of the data collected on helicopter air ambulance operations. This report is the FAA's third submission under the Act and it contains a summary of the data collected by the FAA from helicopter air ambulance operators from January 1, 2017, to December 31, 2017.

We have sent identical letters to Chairman DeFazio, Senator Cantwell, and Congressman Graves.

Sincerely,

A handwritten signature in black ink, reading "DK Elwell".

Daniel K. Elwell
Acting Administrator

Enclosure

Federal Aviation Administration

Annual Report on the Safety of Air Ambulance Operations - 2017

Report to Committee on Transportation and Infrastructure of the House of Representatives and
the Committee on Commerce, Science, and Transportation of the Senate as requested by

Section 306 of Public Law 112-95



2017

The Federal Aviation Administration (FAA) Modernization and Reform Act of 2012 (FMRA) (Public Law 112-95 or The Act) (Title III – Safety, section 44731(a)), enacted February 14, 2012, mandated new reporting requirements for helicopter air ambulance (HAA) operators under Section 306. This provision requires each operator conducting HAA operations to submit annual reports to the FAA that include the following:

1. The number of helicopters that the certificate holder uses to provide helicopter air ambulance services and the base locations of the helicopters;
2. The number of flights and hours flown, by registration number, during which helicopters operated by the certificate holder were providing helicopter air ambulance services;
3. The number of flight requests for a helicopter providing air ambulance services that were accepted or declined by the certificate holder and the type of each such flight request (such as scene response, inter-facility transport, organ transport, or ferry or repositioning flight);
4. The number of accidents, if any, involving helicopters operated by the certificate holder while providing air ambulance services and a description of the accidents;
5. The number of flights and hours flown under instrument flight rules by helicopters operated by the certificate holder while providing air ambulance services;
6. The time of day of each flight flown by helicopters operated by the certificate holder while providing air ambulance services; and
7. The number of incidents, if any, in which a helicopter was not directly dispatched and arrived to transport patients but was not utilized for patient transport.

Section 44731(d) also requires the FAA to submit a report to Congress, containing a summary of the data collected under subsection (a) no later than two years after the date of enactment and annually thereafter. This report is the FAA's third submission to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate under Section 44731 and contains a summary of the data collected by the FAA from HAA operators for the period of January 1, 2017, through December 31, 2017, in accordance with subsection (a) of Section 44731.

To protect the confidentiality of any trade secret or proprietary information, data collected from each operator has been de-identified. Therefore, the identity of the certificate holders, the aircraft bases of operations, and the registration numbers of helicopters engaging in HAA operations have been coded. The seven requests of section 306 and the responses are delineated below:

- (1) Report the number of helicopters that the certificate holder uses to provide helicopter air ambulance services and the base locations of the helicopters:
 - a. The total number of helicopters in HAA service is 1,208. Of the 66 reporting operators, 53 operated between one and nine helicopters; 10 operated between 10 and 99 helicopters; and three operated more than 100 helicopters. For multi-helicopter operators who provide HAA services, it was evenly split between those that reported base locations in one state only and those that reported base locations in multiple states. The only states where certificate holders who provide HAA services did not report base locations were Rhode Island and Vermont. One operator reported

an HAA base in Puerto Rico, and two operators reported five bases outside the United States. The total of all base locations was 951.

- (2) Report the number of flights and hours flown, by registration number, during which helicopters operated by the certificate holder were providing helicopter air ambulance services.
 - a. For the 66 reporting operators, the number of flights and the hours flown for each helicopter operated in HAA service varied tremendously. For instance, one operator with six helicopters used to provide HAA services reported 238 flights and 174 hours flown for the reporting period, while another operator, also with six helicopters, reported 5,916 flights and 2,280 hours flown. Overall, the operators reported an average of 16,673 flights and 7,067 hours flown.
- (3) Report the number of flight requests for a helicopter providing air ambulance services that were accepted or declined by the certificate holder and the type of each such flight request (such as scene response, inter-facility transport, organ transport, or ferry or repositioning flight).
 - a. A summary of the flights accepted/declined for the respective types of requests is delineated in the table below:

Flight Requests Accepted		Flight Requests Declined	
Scene Response	165,575	Scene Response	79,099
Inter-Facility	257,248	Inter-Facility	84,919
Organ Transplant	669	Organ Transplant	93
Ferry	8,610	Ferry	47
Reposition	53,429	Reposition	581

- (4) Provide the number of accidents, if any, involving helicopters operated by the certificate holder while providing air ambulance services and a description of the accidents.
 - a. Seven accidents involving HAA operators were reported for this period, five of which were conducted as 14 CFR part 135 HAA flights as defined in §135.601. A summary of these seven accidents is provided verbatim from the operators' posted reports in Appendix A of this report.
NOTE: The identity of the certificate holders, the aircraft bases of operations, and the registration numbers of helicopters engaging in HAA operations have been redacted.
- (5) Report the number of flights and hours flown under instrument flight rules by helicopters operated by the certificate holder while providing air ambulance services.
 - a. For the 66 reporting operators, 35 reported zero flights and zero hours flown under instrument flight rules (IFR). For the remaining 31 operators, there were an average of 788 flights and 308 hours flown under IFR by the certificate holders while providing air ambulance services.

- (6) Report the time of day of each flight flown by helicopters operated by the certificate holder while providing air ambulance services.
- The aggregate number of HAA flights initiated by all operators broken down by each 1 hour segment of the day is delineated in the table below:

DEPARTING BETWEEN	NUMBER OF FLIGHTS	DEPARTING BETWEEN	NUMBER OF FLIGHTS
00:00 - 00:59	40,756	12:00 - 12:59	53,294
01:00 - 01:59	35,598	13:00 - 13:59	58,622
02:00 - 02:59	31,298	14:00 - 14:59	61,849
03:00 - 03:59	27,008	15:00 - 15:59	64,354
04:00 - 04:59	23,052	16:00 - 16:59	67,383
05:00 - 05:59	20,878	17:00 - 17:59	66,791
06:00 - 06:59	21,185	18:00 - 18:59	68,820
07:00 - 07:59	25,780	19:00 - 19:59	66,932
08:00 - 08:59	32,073	20:00 - 20:59	64,198
09:00 - 09:59	37,338	21:00 - 21:59	58,943
10:00 - 10:59	43,758	22:00 - 22:59	52,309
11:00 - 11:59	49,479	23:00 - 23:59	46,744

- (7) Report the number of incidents, if any, in which a helicopter was not directly dispatched and arrived to transport patients, but was not utilized for patient transport.
- The 66 reporting operators cited 2,438 incidents in which a helicopter was not directly dispatched and arrived to transport patients but was not utilized for patient transport.

APPENDIX A

HAA Accident Summaries
Report Requirement #4

NOTE: To protect the confidentiality of any trade secret or proprietary information, data collected from each operator has been de-identified. Therefore, the identity of the certificate holders, the aircraft bases of operations, and the registration numbers of helicopters engaging in HAA operations have been coded. This redacted information is indicated in the material below by "XXX."

Company ID	Number Accidents	Accident Description
2017HAA007	1 of 4	<p>On February 7, 2017, about 0520 eastern standard time, a Eurocopter Deutschland GMBH EC 135 P2+, was substantially damaged following a hard landing and dynamic roll over. The pilot and two passengers were not injured. The helicopter departed from XXX and was destined for an emergency medical service heliport located near XXX. Visual meteorological conditions prevailed and no flight plan was filed for the emergency air medical flight conducted under the provisions of 14 Code of Federal Regulations Part 135. According to the pilot, he was dispatched to an accident scene about 35 nautical miles from his base operations. The pilot checked the weather and completed a risk assessment form. The forecast was for visual flight rules and he departed for the scene sometime before 0500. He further stated that he climbed to 2,500 feet mean sea level and noted the winds were from the southwest at 35 knots. He stated he was comfortable flying in those conditions, and had flown in similar conditions several times before. Once he arrived at the landing zone, he was cautious of electrical wires that were next to the helipad, so he maneuvered the helicopter over the wires at 100 feet to clear them and then started about a 200 foot per minute descent. When the helicopter was just above the ground, the pilot increased the collective but the descent did not slow. He stated to the crew "this was going to be a hard landing." The helicopter bounced when it hit the ground and rolled over onto the right side. The pilot told everyone to remain in the helicopter until the rotor stopped spinning to avoid injuries. After the rotor stopped spinning, all three occupants exited the helicopter. The pilot stated there were no known mechanical deficiencies with the helicopter prior to the accident. Examination of the wreckage by a Federal Aviation Administration inspector revealed that the helicopter came to rest on its right side. All four main rotor blades were destroyed during impact. All four main rotor pitch links were broken from impact as well as the rotating scissors. The tailboom was fractured at the horizontal stabilizer/fenestron mount. The tail rotor and vertical fin assembly were intact and the blades did not exhibit any damage. The upper left horizontal stabilizer vertical winglet was damaged consistent with contact from the</p>

		main rotor blades. The pilot's windshield and skylight were broken and the nose bow area was crushed.
2017HAA007	2 of 4	<p>On July 1, 2017, about 2036 central daylight time, a Messerschmitt-Bolkow-Blohm BK 117 B2, helicopter, landed hard and rolled over during an emergency landing to a field near XXX. The pilot, three crew members, and a passenger received minor injuries, and the helicopter sustained substantial damage. The helicopter was owned and operated by XXX doing business as XXX, as a 14 Code of Federal Regulations Part 135 medical flight. Visual meteorological conditions prevailed at the time of the accident, and a company visual flight rules flight plan was filed. The flight originated from XXX about 2019 and was en route to XXX. The pilot reported that when the flight was about 5 miles north of XXX, the helicopter "experienced a sharp change in attitude yawing to the left with a hard-upward bump," followed by a change in the engine noise. He observed the N1 gauges both indicating below 40 percent and decreasing. The No. 1 engine low warning light, the No. 1 generator light, and the battery discharge warning lights were illuminated. He stated, "Suddenly the aircraft pitched nose up and rolled to the right. I could hear the rotor begin to deteriorate." He entered an autorotation by applying right forward cyclic and lowering the collective to full down. During the autorotative descent, he saw a power lines and a ditch, which required him to change his flight path to land on the far side of the ditch. He flared the helicopter about 100 ft agl and the rotor rpm began to decay rapidly. He attempted to level the helicopter "as it began to fall through." The helicopter landed right skid low and the helicopter skidded for about 100 ft. The main rotor blades hit the ground as the helicopter rolled onto its right side. Once the helicopter came to a rest, he pulled the power levers to the stop position. The pilot and flight crew, with the patient on a stretcher, egressed the helicopter. The pilot reported that he observed fuel draining in a solid stream from one of the drains on the belly of the helicopter. He re-entered the cockpit and turned off all electrical and fuel switches to minimize the risk of fire. At 1955, the surface weather observation at, located 15 nm northeast of the accident site, was: wind, light and variable; 10 miles visibility; sky clear; temperature 26 degrees C; dew point 17 degrees C; altimeter 30.05 inches of mercury.</p>
2017HAA007	3 of 4	<p>On September 8, 2017, about 1120 eastern daylight time, a Eurocopter Deutschland GMBH MBB BK117-C2 helicopter, was destroyed when it crashed on a wind turbine farm near XXX. The commercial pilot, two flight nurses, and one patient were fatally injured. Day visual meteorological conditions prevailed at the time, and a company flight plan was filed for flight that departed about 1108. The flight was destined for XXX. The helicopter was operated by XXX under the provisions of 14 Code of Federal Regulations Part 135.</p>
2017HAA007	4 of 4	<p>On November 19, 2017, about 1855 central standard time, a Bell 407 helicopter, impacted terrain near XXX. The pilot and two medical crew members were fatally injured, and the helicopter was substantially damaged. The helicopter was registered to XXX and operated by XXX under the provisions of 14 Code of Federal Regulations Part 91 as a positioning flight. Night visual meteorological conditions prevailed for the flight, which operated on a company visual flight rules flight plan. The flight originated from XXX and was en route to XXX to pick up a</p>

		patient. Residents near the accident site reported hearing a boom and seeing a fire plume. Local law enforcement located the wreckage on private property on the bank of a reservoir. A post impact fire consumed a majority of the fuselage. All major helicopter components were located at the accident site. Several bird carcasses were located in the wreckage of the helicopter. The helicopter was retained for further examination.
2017HAA026	1	On December 15, 2017, an aircraft had a rotor brake fire while on the ground. Damage occurred to the rotor brake area. There were no injuries or damage to other property.